

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A magnetic device comprising:

a pinned magnetic layer with a magnetization vector with a fixed magnetization direction;

a free magnetic layer with at least one magnetization vector with a changeable magnetization direction;

a first non-magnetic layer that spatially separates separating said free magnetic layer and said pinned magnetic layer ~~such that the mutual magnetic interaction between said free magnetic layer and said pinned magnetic layer is minimized~~;

a read-out magnetic layer with a magnetization vector with a fixed magnetization direction; and

a second non-magnetic layer that spatially separates said free magnetic layer and said read-out magnetic layer such that the mutual magnetic interaction between said free magnetic layer and said read-out magnetic layer is minimized.

2. (Original) The magnetic device according to claim 1, wherein one of said magnetization directions of said pinned magnetic layer, said free magnetic layer, and said read-out magnetic layer lies along an axis which is different than at least one of axes along which said other magnetization directions lie.

3. (Original) The magnetic device according to claim 1, wherein:

said fixed magnetization direction of said pinned magnetic layer is perpendicular to a plane of said free magnetic layer; and

consisting of Co, Ni, Fe, an alloy of Co and Ni, an alloy of Co and Fe, an alloy of Ni and Fe, an alloy of Co, Ni, and Fe, and permalloy $\text{Ni}_{1-x}\text{Fe}_x$.

9. (Original) The magnetic device according to claim 1, wherein said pinned magnetic layer, said free magnetic layer, and said read-out magnetic layer are comprised of a non-magnetic metal and a member of the group consisting of an alloy of Co and Ni, an alloy of Co and Fe, an alloy of Ni and Fe, an alloy of Co, Ni, and Fe, such that said non-magnetic metal and said member are ferromagnetically ordered at room temperature.

10. (Original) The magnetic device according to claim 9, wherein said non-magnetic metal is a member of the group consisting of Cu, Pd, and Pt.

11. (Original) The magnetic device according to claim 1, wherein said pinned magnetic layer, said free magnetic layer, and said read-out magnetic layer are comprised of a member of the group consisting of NiMnSb and a conducting magnetic oxide.

12. (Original) The magnetic device according to claim 11, wherein said conducting magnetic oxide is either CrO_2 or Fe_3O_4 .

13. (Original) The magnetic device according to claim 1, wherein said non-magnetic layers are comprised of at least one member of the group consisting of Cu, Cr, Au, Ag, and Al.

stopping said electric current when a magnetization vector of said magnetic device has rotated 180° while said electric current is applied.

22. (Original) The method according to claim 21, wherein said current applying step occurs in a sub-nanosecond period of time.

23. (Currently Amended) A method of making a memory cell, said method comprising the steps of:

forming a first non-magnetic layer on a pinned magnetic layer, said pinned magnetic layer having a magnetization vector with a fixed magnetization direction;

forming a free magnetic layer with at least one magnetization vector with a changeable magnetization direction on said first non-magnetic layer;

forming a second non-magnetic layer on said free magnetic layer; and

forming a read-out magnetic layer with a magnetization vector with a fixed magnetization direction on said second non-magnetic layer;

~~wherein said first and said second non-magnetic layers minimize the mutual magnetic interaction between said pinned magnetic layer, said free magnetic layer, and said read-out magnetic layer.~~

24. (Original) The method of making a memory cell according to claim 23, wherein one of said magnetization directions of said pinned magnetic layer, said free magnetic layer, and said read-out

